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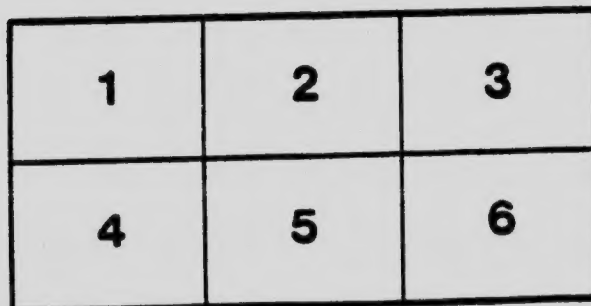
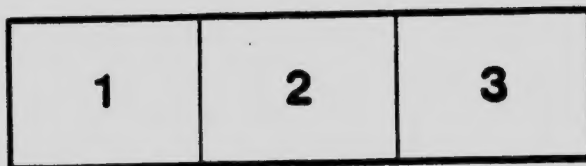
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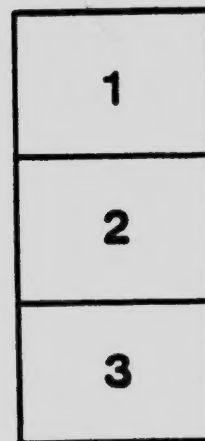
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REPORT

WITH RESPECT TO THE

YUKON TERRITORY

1907

OTTAWA
GOVERNMENT PRINTING BUREAU

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DEPARTMENT OF THE INTERIOR,

OTTAWA, September 30, 1907.

To the Honourable FRANK OLIVER,
Minister of the Interior,
Ottawa.

SIR,—On the 19th of July last you instructed me to proceed to the Yukon Territory, with as little delay as possible, for the purpose of examining into and reporting to you with respect to the conditions at present prevailing in that territory. I left Ottawa on the 22nd of July, reached Dawson on the 9th of the month following, and at once proceeded to visit the several creeks upon which mining operations are at present being carried on.

A report with respect to the Dawson Mining District must be to a large extent a description of the operations and expenditures of the Yukon Gold Company, which company has acquired by purchase or otherwise a very large number of the placer mining claims in that district, and are still acquiring additional claims to complete the area over which they propose to extend their operations.

The principal gold-producing streams of this district include the Bonanza, Eldorado, Hunker and Bear creeks and their tributaries, and on these streams the above company have already acquired about nine hundred and fifty claims. From the mouth of Bonanza creek to No. 30 above Discovery, a distance of about fifteen miles, the company have acquired all the creek claims, with the exception of Nos. 13, 14, 15, 16, 42, 43 and 49 below Discovery, and on Eldorado creek they control all claims up to and including Claim No. 23, a distance of about two and one-half miles. On Hunker creek and its tributaries the company have acquired some one hundred and sixty claims, on Bear creek twenty-two claims, and on the Klondike benches thirty-

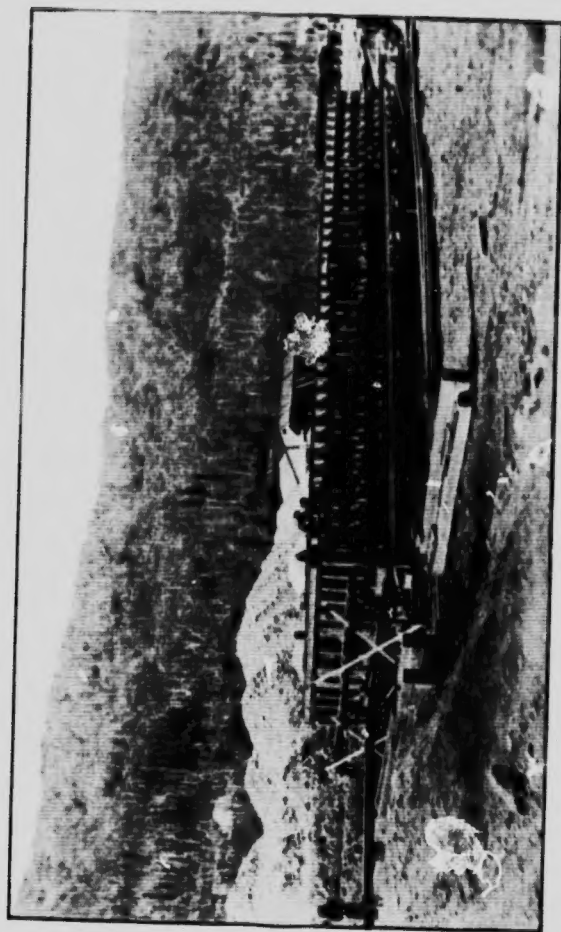
seven claims. They have also acquired nearly all the hill and bench claims along these streams. This gives the company an hydraulic face and pit of about five miles in length, and a connected mine of probably greater length than any of its kind in the world.

The company propose to operate this extensive mine by the dredging and hydraulic mining process, and they have grouped their claims for representation purposes under the provisions of Section 51 of the Placer Mining Act, and have already incurred a very large expenditure in the installation of machinery and the introduction of water for such purpose.

DREDGES.

The company are at present operating two large Risdon dredges on Claim No. 104 and one on Claim No. 90 below Discovery on Bonanza creek. These dredges are of the largest pattern and have a capacity of between 2,000 and 3,000 yards per day, according to the nature of the ground in which they are operating. The ladder by which the ground is elevated comprises an endless chain of about seventy buckets, each of which weighs nearly a ton, so that the total weight of the ladder is in the neighbourhood of seventy tons. It is capable not only of taking up all the earth and gravel to bed-rock but also of taking up several feet of such rock. The hull, which is about ninety-five by forty feet, is constructed of British Columbia fir, the timbers being of sufficient size and strength to withstand the enormous strain resulting from the operation against a solid face of a ladder of the weight mentioned. The cost of such a dredge is about \$150,000 and it requires a crew of about twenty men for the different shifts.

The company have at present under construction four additional dredges, one at Claim No. 90, below Discovery on Bonanza creek, one at the mouth of Hunker creek, one on what is known as the 'Anderson' hydraulic location, and one at Claim No. 37 below on Hunker creek. The company will, therefore,



Bridge under Construction.



Dredge, Yukon Gold Co.

have in operation next season seven immense dredges, four on Bonanza creek and three on Hunker creek, representing an expenditure of over \$1,000,000, which under favourable conditions will be capable of handling about twenty thousand cubic yards of gravel per day. It has been clearly shown that frozen ground cannot be profitably operated by means of a dredge, as the ground when elevated in that condition is passed through the screens and over the plates without giving up the gold which it may contain, thus rendering the operation unprofitable. It has been found, however, that if the surface of the ground, which is composed of moss, muck and other decayed vegetable matter, is stripped off, the gravel underneath will thaw to bed-rock in about one season. The company, therefore, have a large force of men employed in stripping and ground sluicing a large area on lower Bonanza, so that next season the dredges may proceed without encountering frozen ground. In order to provide work for the present season large thawing operations are being carried on in advance of the dredges by means of steam points, which renders the work, for the present season at least, specially expensive.

The dredges are operated by means of electricity generated by a power plant situated at the mouth of Little Twelve Mile river, a distance of about thirty-five miles in a direct line from the scene of operations. The water by which the power is generated is taken from Little Twelve Mile river about four and one-half miles from its mouth, carried along the left limit of that stream in a flume seven feet by four feet in size, and delivered on the hillside about eight hundred feet above the bed of the stream. It is there passed down a steel pipe twenty-four inches in diameter and applied to two Pelton wheels through a three and three-quarter inch nozzle, with a vertical head of six hundred and seventy-four feet. The two generators now in use develop about 2,000 indicated horse power. The energy developed is then carried over a transmission line, comprising three copper wires, in an absolutely direct line to the head of Trail

Gulch, a tributary of Bonanza creek on its right limit, about three miles from its mouth, and is delivered at the point of operation with about ninety-seven and one-half per cent efficiency.

The maximum power required for each dredge is about three hundred horse power, so that the plant already installed is capable of operating the dredges now in commission and also those under construction. The cost of this power plant and transmission line is about \$250,000, but by means of it the company will be able not only to operate their dredges, but also to operate elevators for the sluicing of the ground which may be mined by hydraulic process on the lower levels of the creek where the elevation would not otherwise be sufficient to admit of successful hydraulic operations.

DAM ON BONANZA.

By an Order in Council dated the 26th of April, 1904, Captain H. H. Norwood was permitted to impound the unentered and unappropriated waters of Bonanza creek by the erection of a dam at Claim No. 56 above Discovery on Bonanza creek. The Yukon Gold Company acquired this right by purchase and they have erected, and almost completed, a dam at the point mentioned.

This dam is about four hundred feet in length in the bottom of the stream and about five hundred feet on top. Its base is two hundred and thirty feet wide and it tapers to a width of forty feet on top. It is comprised of a permanent collar-core composed of timbers six by eight inches, sunk eight feet into bed-rock and drift-bolted throughout. In front of this core is a puddle pit ten feet in depth, with supporting walls back and front varying in width from two hundred and twenty feet at the bottom to thirty feet at the top. The dam is seventy feet in height, all stone faced, creates a reservoir nearly one and one-half miles in length, and cost about \$200,000.

Notwithstanding the fact that the company will have seven



Stripping and Ground Shuicing.



Thawing with Steam Points.

of the largest and most modern dredges at work next summer, it is not their intention to dredge the entire bed of the creeks which they control. They propose to hydraulic not only the hill-sides and benches, but also a large portion of the creek bed, and for this purpose they have sunk large sump-holes about twenty feet into bed-rock at intervals along upper Bonanza creek, and it is their intention to use the water stored in this reservoir to hydraulic the creek bed into these holes and elevate the wash-dirt by means of electric elevators to be sluiced in the usual way.

DITCH.

The company have obtained the right to divert five thousand inches of water from Tombstone creek, a tributary of Twelve Mile river on its left limit, about twenty miles from its mouth, also to divert a like quantity from the main stream at a point about ten miles higher up. This water is to be carried through a ditch, flume and pipe a distance of about seventy miles to the head of Trail Gulch, at a sufficient elevation to command all the workable gravels in the Bonanza basin. The water is taken from Tombstone creek about four and one-half miles from its mouth and carried along its left limit and along the left limit of the main stream to the mouth of Little Twelve Mile river, where it has reached an elevation of eight hundred feet above the bed of the river. It is here carried across the Little Twelve Mile depression by means of a steel syphon seven thousand five hundred feet in length and dropped into the power flume of Little Twelve Mile above the point where the water is taken from that flume to operate the power plant. The weight of the steel in this syphon is about one thousand tons.

Of the seventy miles that this water is carried, only about forty miles is by ditch, the balance being by flume and pipe. The Little Twelve Mile, Lepine and Klondike depressions are the most difficult, and are in each case crossed by steel inverted syphons forty-nine inches in diameter and varying from five-eighths to three-fourths of an inch in thickness, according to the

pressure to which they are subjected. The total length of steel pipe of this character is five and one-half miles, and the total weight over seven million pounds or thirty-five hundred tons. The greatest depression is at the Klondike river. The water is delivered at the top of Thomas Dome, one thousand one hundred feet above the bed of the stream, so that the pipe will be subjected to a head of eleven hundred feet, or a lateral pressure of about five hundred and twenty pounds to the square inch. The total length of this syphon is thirteen thousand six hundred feet, and its weight about seventeen hundred tons. This huge syphon is carried across the Klondike river on a steel bridge erected on concrete piers. Over the lesser depressions the water is carried through California redwood pipes of the same dimensions, hooped with half inch round iron every one and three-fourths inches.

About six miles of this pipe will be required to carry the water over the Ballarat depression and over a portion of the Lepine and Klondike depressions. Over about twenty miles of the entire distance the water is carried through a flume seven feet by four feet, constructed of native timber, and supported for the greater part on trestles. For the balance of the distance the water is carried through a ditch about fifteen feet wide in the bottom, with sloping sides, and is capable of carrying more than ten thousand inches of water.

Before commencing operations it was necessary for the company to strip the surface of the right of way for a width of about forty feet, in order that the ground might thaw out.

Notwithstanding this precaution they have encountered a great deal of frost which has materially retarded their work. The ditch is being constructed by means of four steam shovels operating at different points. About fourteen hundred men and two hundred and eighty horses are at present employed on the work. The pay roll for the month of August last amounted to \$170,000, or nearly \$6,000 per day, nearly all of which goes to the labouring class of the territory. Only the members of the



Power House on Twelve-mile.



Transmission Line.

engineer's and office staffs have been brought into the country. The men are paid at the rate of \$28 per week, with board and lodging, which in the locality in which the work is being carried on is equal to about \$7 per day. In the several camps which I visited the food was equal to that offered in any first-class hotel, the bunk-houses and grub-tents were comfortable and clean, and the sanitary conditions absolutely perfect. As a result the men appeared to be perfectly satisfied.

The ditch will probably be approaching completion in the autumn of 1908, provided the material for the syphons is delivered, but a great deal of work will still remain to be done to make it efficient. When completed this water system will have cost more than two and one-half million dollars.

In order to construct their ditch it was necessary for the company to build a wagon road from Bear creek to the mouth of Little Twelve Mile river, a distance of about forty-five miles through an unbroken wilderness and over one of the roughest sections of the country. This they did at a cost of about \$75,000 and without government aid. Over this road nearly all the material and supplies necessary in connection with the construction of this large water system have been carried.

The life of a placer mining camp varies from five to ten years, according to the value and extent of the discovery. During the first few years, while the rich mines are being worked, the camp is prosperous, then follows a period when economy is necessary to make the lower grade gravels pay, and when these are worked out as far as the supply of water will admit, the period for individual operations has come to an end, and the remaining deposits can only be worked on a large scale by companies of large capital who control large areas.

The Yukon Gold Company entered the Klondike district at a time when the camp was rapidly approaching the last stage and when individual operations had almost come to a close, and they have given it a new life. They have purchased, practically at the price asked, nearly all the creek, bench and hill claims on

Bonanza and Eldorado creeks, and a large number on Hunker and Bear. Nearly all of the creek claims were worked out, so far as the operations of the individual miner are concerned, and in many instances the company paid liberal sums for bench and hill claims which were of no commercial value whatever to any miner of limited means, owing to the fact that they were beyond the reach of any ordinary water supply.

By means of the large quantity of water which the company propose to land on the Bonanza hillsides, high enough to operate with a sufficient head all the workable gravels of the district, they will be in a position to work large areas which heretofore have been scarcely touched owing to the difficulty of getting water on these high bench lands at a sufficiently low price to warrant the operation of the ground at a profit. These bench grounds, however, are known to contain sufficient gold to yield a profit to large operations with cheap water.

It was not possible to obtain an exact estimate of the amount which the company have expended in the purchase of placer mining claims in the district, but there is no doubt that their expenditure in this respect will reach several millions of dollars. The company have also secured a very large number of working contracts from miners who preferred to have their claims worked on this basis rather than dispose of them outright.

TIMBER.

As a very large amount of lumber was necessary for the construction of this water system the company have erected a saw mill on Twelve Mile river, about five miles below the mouth of the Little Twelve Mile. Under the provisions of section 48 of the Placer Mining Act a miner is permitted to cut timber, not otherwise acquired, for his own use and for any purpose incidental and necessary to the operation of his claim. As the company required this timber in connection with the working of their mining claims they had the right to cut the same free of dues. They therefore established lumber camps on the upper

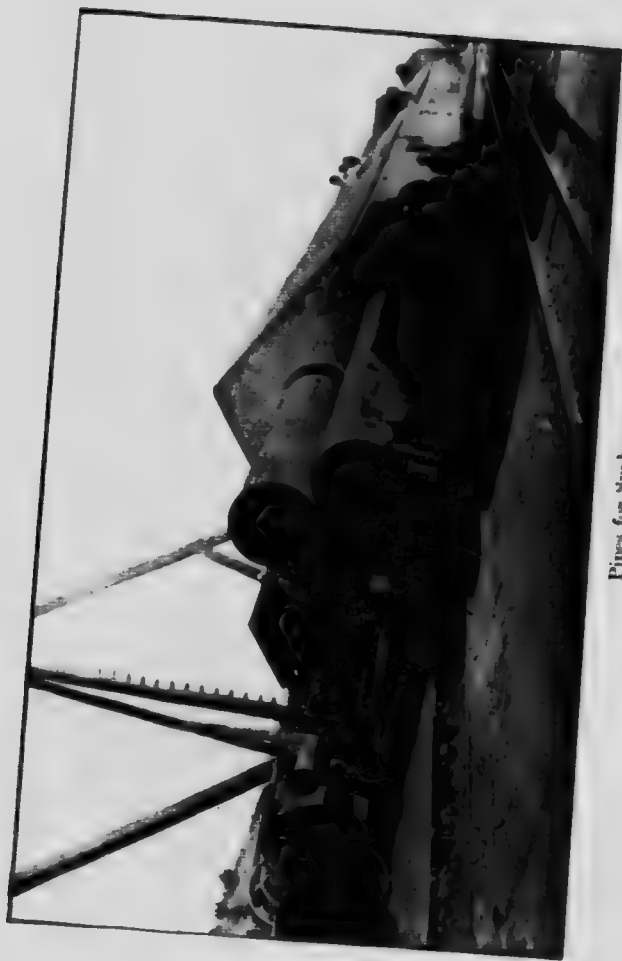
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Dam on Bonanza.



Pipes for Nylbman.

Twelve Mile river and floated their logs down to the mill, where they were manufactured into the material necessary for the construction of their water flumes. The trestles, braces, sills, uprights, etc., necessary to fully complete the flume are completed and fitted at the mill ready to be freighted during the winter months to the different points along the ditch where they are to be used. The mill has already manufactured about ten million feet of lumber, all of which is required for the completion of their water system.

As the Yukon Gold Company have acquired a very large number of placer mining claims in the Klondike water-shed, and as their operations during the present year are almost exclusively confined to dredging on two of these claims, the mining operations in the vicinity of Dawson are not nearly so active as in the past, and no doubt until the company have completed their water system the gold output for the territory will be materially diminished. The indications are, however, that when this water system is in full operation a very material increase in the gold output of the territory will be experienced, and for a few years at least the amount of gold exported from the Yukon Territory will be almost as great as it was during past years.

OTHER DREDGES.

On the Klondike river two large dredges are in operation, one on the Boyle hydraulic location and the other on the group of placer mining claims situated below the Ogilvie bridge, owned by The Bonanza Basin Gold Dredging Company. The first mentioned dredge is the property of The Canadian Klondike Mining Company and is being operated on the right limit of the Klondike river just below the mouth of Bear creek. It is a dredge of the largest pattern, capable of handling about three thousand cubic yards per day, and has been operating continuously on this location since the summer of 1905, with very satisfactory results.

The second dredge was also installed during the summer of 1905 and operated during the past two seasons. It is not of the largest type, nor is it so modern in construction as the other dredges referred to, but during my visit it was being entirely remodelled and made thoroughly efficient.

At No. 6, below Discovery on Bonanza creek, which is directly opposite Cheechaco hill, a small dredge is now operating. This dredge is the oldest in the country, having been brought into the territory in the spring of 1899 by the Lewes River Gold Dredging Company, and operated unsuccessfully during the first year at Cassiar bar near the mouth of Little Salmon. It was then moved to Claim No. 42 below Discovery on Bonanza creek and afterwards to Discovery claim on that stream, where it has been operated for the past four years with pronounced success. As this claim and the claims adjoining it are now worked out, the dredge has been placed on Claim No. 6, below Discovery where it is now operating.

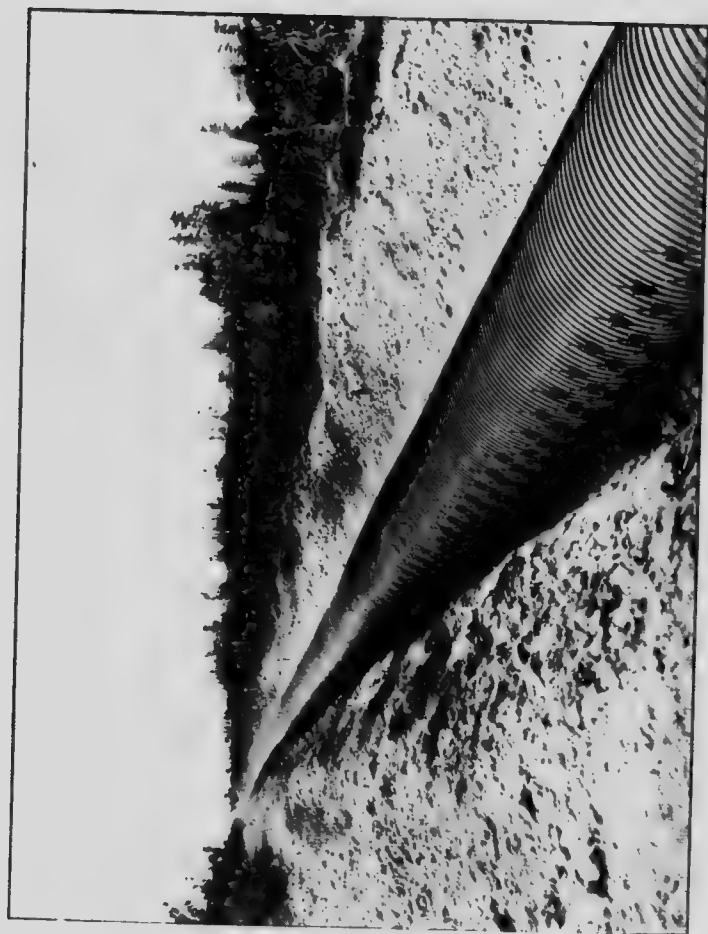
The Ogilvie dredge which was brought into the country in the spring of 1902, operated for two seasons on the Stewart river. It was then removed to the mouth of the Klondike river and operated for two seasons on the Bonanza Basin group of claims and on the dredging leaseholds near the mouth of that stream. It has recently been sold to the owners of a group of claims on the Indian river, and has been taken to that stream to commence operations next season.

In the summer of 1906 the Canadian Forty-mile Gold Dredging Company installed a large dredge on Forty-mile river for the purpose of operating their dredging leaseholds there. This dredge operated with partial success during a part of last season, and continuously and profitably during the present year. Some delay was experienced in getting the dredge over the shallows near the mouth of the river, but it is now installed at the foot of the canyon and the results appear to be satisfactory to the company. This company also have a dredge operating on the same stream at a higher point and in American territory,

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Ditch.

but it is thought that this dredge will be brought down stream and operated on the Canadian side of the line.

Mr. F. B. Vrooman, who is the holder of dredging leases on the Hootalinqua river, is said to have installed a small prospecting dredge on that stream. The dredge is of a very primitive character, and is only intended to test the gravels with the view of deciding whether the ground is sufficiently rich to warrant the introduction of more expensive machinery.

HYDRAULIC OPERATIONS.

This season is said to be one of the driest in the history of the Yukon Territory, and as August is probably the driest month of the year mining operations were to a large extent suspended during the period of my visit, owing to the lack of water. Large hydraulic mining operations, however, are being carried on in different portions of the Klondike District during that period of the year when water can be obtained. Perhaps the largest operators of this kind are The Bonanza Creek Gold Mining Company, the lessees of the Matson and Doyle locations. They obtain their supply of water from Adams and Stampede creeks, and have erected a large dam on the former stream with the view of conserving the supply of water.

These streams, however, do not contain sufficient water to admit of operations being carried on continuously during the entire summer, and at the very season when their operations would be most profitable they are compelled to suspend all operations owing to the failure of their water supply. There is no other source from which they can obtain a supply of water without incurring an expenditure much greater than the area of their holdings would warrant. They are also hampered in their operations owing to the lack of dumping ground, the creek, hillside and bench claims in front of their locations having been acquired by other interests.

On Hunker creek hydraulic operations are being carried on on Dago, Paradise, Whiskey, Temperance and Delhi hills and

on the Williams hydraulic mining location situated on the right limit of Hunker creek at Bee Gulch. The water to operate Delhi Hill and the Williams location is taken from Hunker creek at claims numbered 18 and 20 above Discovery, respectively, and carried along the hillside to the points of operation. Temperance Hill is operated by means of water taken from Gold Bottom creek, and Paradise hill by water from Hester gulch and 70 Pup.

On the Sixty-mile river the North American Transportation and Trading Company are still operating their hydraulic mining location with, it is understood, only partial success. This would appear to be due to the fact that the location is a dredging rather than an hydraulic mining proposition, and that the energies of the lessees have so far been directed towards working the ground by the hydraulic process.

PLACER.

On Bonanza and Eldorado creeks, which were formerly the largest gold producers in the territory, very little mining is being carried on. This is due to the fact that the large majority of the creek claims have been worked out so far as the operations of the individual miner are concerned, and also owing to the fact that The Yukon Gold Company have acquired practically all the claims on these streams and their water scheme is not sufficiently advanced to admit of operations being commenced for at least another year. Some sixteen claims throughout the entire length of Bonanza and Eldorado creeks, however, are being actively operated with very satisfactory results.

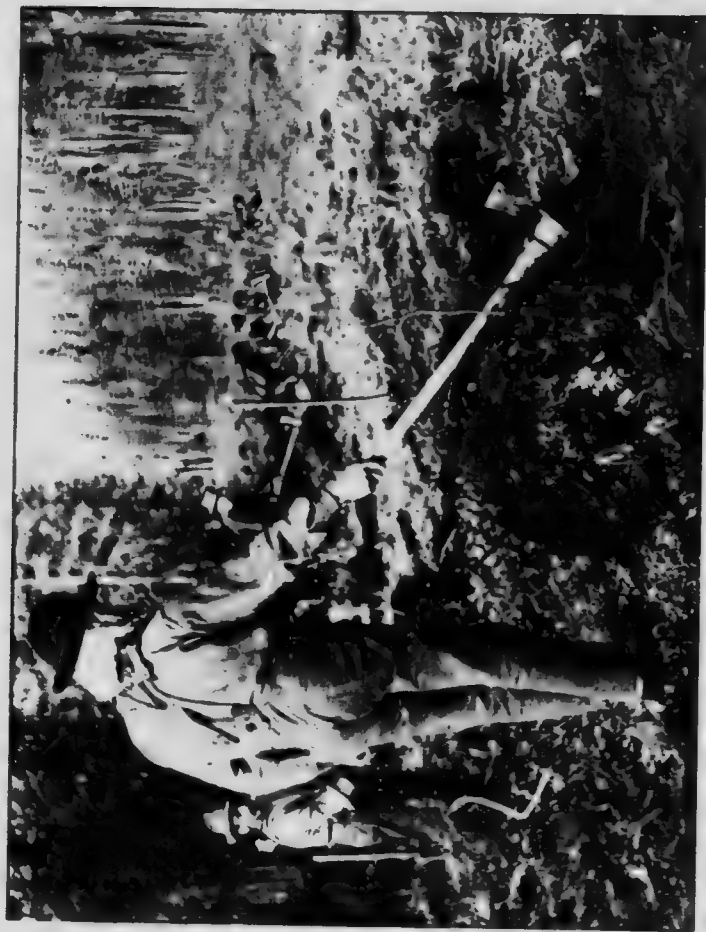
Hunker creek was not active during the period of my visit, owing to the scarcity of water. This creek was one of the first to be operated, so that a large number of the claims have been worked out, and the Yukon Gold Company have acquired a very large number of creek, hill and bench claims along the stream. Notwithstanding this fact some ten properties on Hunker and

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Shipping Ditch Right of Way.



Freighting, Yukon Gold Co.

Gold Bottom Creeks are being actively operated by modern placer mining methods.

Sulphur creek above Discovery is to a large extent worked out, but Green Gulch, a tributary on the left limit at Claim No. 37 above is being very fully worked. From Claim No. 30 to No. 56 below Discovery on Sulphur creek active operations by modern placer mining methods are being carried on, water being taken from the main stream and from Brimstone creek and 45 Pup. From Claim No. 56 below Discovery to the mouth of the stream, a distance of about five miles, no operations of any kind have ever been carried on, as sufficient values have not been found to warrant operation.

Dominion creek throughout its entire length is being operated to a greater or less degree. Below Lower Discovery, and especially between Claims 231 and 268 operations are being actively carried on and high values are being obtained, sufficient water being obtained from the main stream at a higher point to efficiently work these claims.

Gold Run creek has been worked as far as Claim No. 43 above the mouth, at which point the highest values were found. Claims numbered from 1 to 7, as well as claims numbered 27, 30 and 34 are being worked, the balance of the claims being grouped with these for representation purposes. There are no hillside claims on this stream.

Quartz creek has been worked during the year throughout its entire length, but owing to the great scarcity of water operations in many instances had to be suspended. On the 30th of April, 1906, the lease in favour of the Quartz Creek (Yukon) Syndicate of an hydraulic mining location situated on this stream was cancelled and the ground thrown open to placer mining entry. Almost the entire location has since been staked out by individual miners (as many as seventeen applications having been received for one claim), and they are being actively worked as far as the supply of water available will admit. It would

appear from the extent and activity of the operations that satisfactory results are being obtained.

In the Forty-mile district three creeks have been fully staked and are being rapidly developed. The most promising of these streams is Fall creek, upon which about one hundred and fifty claims have been staked. Moose and Bear creeks have also been fully staked and are being represented. Winter work will probably be carried on to a very large extent on these streams. There are about seventy-five miners in this portion of the territory.

In the Duncan Creek district a very considerable number of miners are engaged, and in many cases good values are being obtained. Owing, however, to the deep sinking in many portions of the district and the presence of water, great difficulty is experienced in reaching bed-rock. The territorial government has subsidized a pump of sufficient capacity for use in this district, and another effort is to be made during the coming winter to reach bed-rock in the deep sinkings.

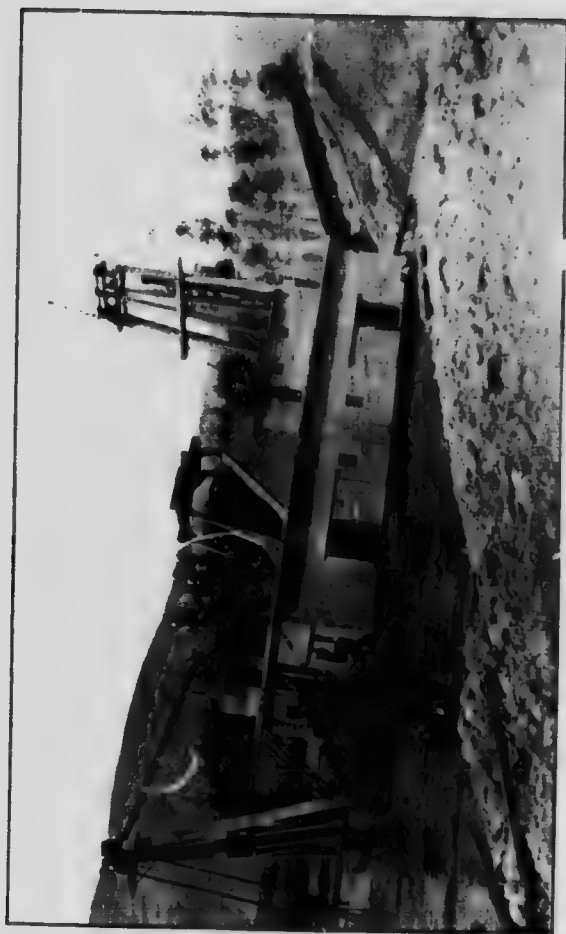
Black Hills creek, a tributary of the Stewart river on its right limit about thirty miles from the mouth has recently been staked throughout its entire length, and the indications are that it will become a very large producer. The work on this stream so far has been mostly of a prospecting character.

WHITEHORSE.

It appears from present indications that Whitehorse will, in the near future, become a very important mining camp.

Some years ago copper was discovered in the mountains lying to the west of Whitehorse, and a large number of claims have since been staked out and recorded. Work has been carried on to some extent on these claims for the past six or seven years, but it is only recently that the several prospects discovered have been developed into mines.

I visited a number of these mines during my stay in White-



Bear Creek Bridge.



Discovery Bridge.

horse, and found a large number of men employed and a considerable quantity of ore being shipped as rapidly as the means of transport would admit.

The 'Arctic Chief' mine, owned by Captain John Irving, is situated about six miles from Whitehouse. A tunnel has been driven into this claim about two hundred and twenty-five feet, following the ore bodies, and about three hundred and fifty tons of ore, averaging six per cent, and carrying small quantities of gold and silver, have been shipped. About twenty men are employed in this mine, and about eighty thousand tons of shipping ore have been blocked out.

The 'Grafter' copper mining claim, owned by Mr. Robert Lowe, is next to the 'Arctic Chief,' and employs about thirty men. The shaft is down about eighty feet and a tunnel has been driven into the hill about one hundred and fifty feet. Five thousand tons of ore have been shipped to the smelter at Ladysmith, the cost of shipment and treatment averaging \$12 per ton, which leaves a working profit. The buildings and appliances in connection with this mine are of a superior character.

The 'Best Chance' mineral claim is owned by Captain Irving. The shaft is down about thirty feet and a very large and rich showing of copper ore has been found. This mine will probably be shipping in a very short time.

The 'Pueblo' mineral claim is owned by Byron N. White of Spokane. This mine shows the largest outcropping of copper ore of any in the territory. About ten men are employed, and a tunnel has been run for a distance of three hundred feet. The mine, however, has been opened from the top and is being operated like a quarry. About nine hundred tons of ore have been shipped to the smelter at Ladysmith, but shipments have ceased owing to the drop in the price of copper. The cost of shipment and treatment is about \$11 per ton. During the time of my visit there were about two thousand tons of picked ore on the dump.

The 'Copper King' has a shaft down about eighty feet and runs about one hundred and seventy-five feet into ore, at the end of which there is about one hundred feet of drifting. This mine is equipped with a compressor and hoist, and shipping had only commenced about a week previous to my visit. About thirty-five men are employed in this mine and about one hundred and fifty tons have been shipped to the smelter.

The 'Carlyle' mineral claim, owned by Byron N. White, has a shaft down to the 100-foot level, and has shipped about one hundred and fifty tons of high grade ore.

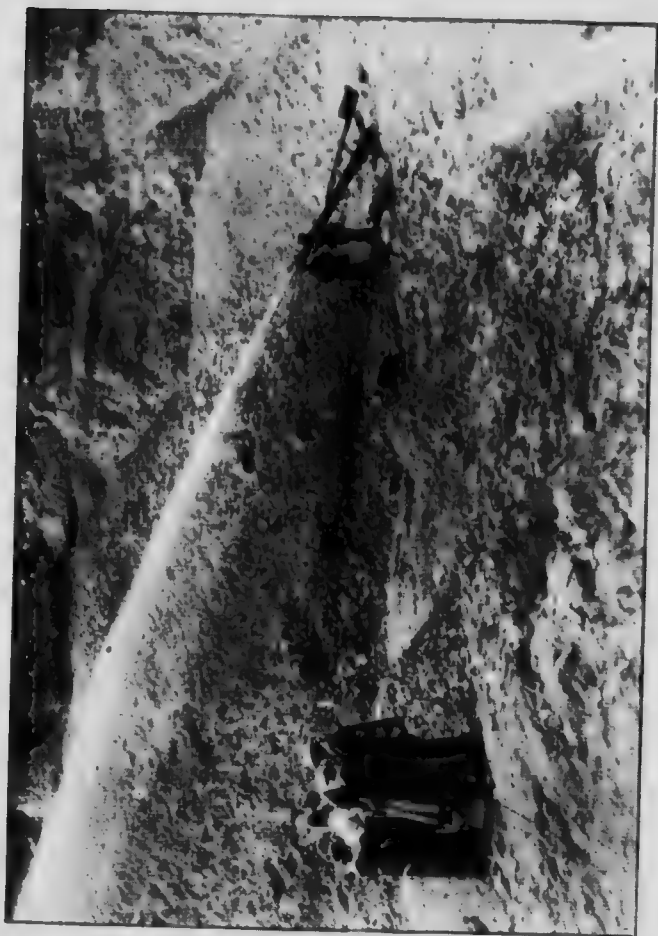
The 'Rabbit's Foot' and 'Anaconda' claims are owned by Mr. W. S. Thomas, of Alleghany. The shaft on the former is down about forty-five feet and on the latter twelve feet. Great difficulty is experienced in obtaining a sufficient number of men to carry on development work as rapidly as the owner desires.

The 'War Eagle' has a tunnel sixty feet long from which high grade ore is being taken out. Preparations are being made for shipping.

About ten or fifteen other copper claims in the vicinity of Whitehorse are being developed as rapidly as the supply of labour will admit. A number of claims have recently been sold at very satisfactory prices, and no doubt next season operations in the vicinity of Whitehorse will be very active. It is claimed that the ore from all of the mines above referred to will average 6 per cent copper, which is one hundred and twenty pounds to the ton. At eighteen cents a pound the value of the copper in a ton of ore would be \$21.60. As the ore can be mined, shipped and treated for about \$12 or \$13 a ton, copper at the price mentioned would give a fair profit.

CONRAD.

Operations in connection with the Conrad quartz mining properties, situated on the Windy Arm of Tagish lake, were not very active during the period of my visit to Whitehorse. This



Hydraulic cleaning on Adams' Hill.



Hydraulic on Matson Location.

was due, I understand, to several causes, the chief of which was that a number of claims are involved in litigation.

The 'Venus' mineral claim has about twenty-one hundred feet of development work and employs about twenty men. It is equipped with an air compressor and aerial tram, and is looked upon as a very promising claim indeed.

The 'Vault' and 'Mountain Hero' have about seven hundred feet of development each, and are also equipped with compressors and aerial trams.

The 'Montana' has about fourteen hundred feet of development and is equipped with a hoist.

The Canadian Yukon Mining Company are interested in the 'Howard,' 'Big Thing,' 'Ram's Horn,' and various other properties, in connection with each of which a small amount of development work has been done.

About fifty men in all are employed in connection with the quartz mining properties in this locality.

Throughout the Yukon Territory a great many quartz mining claims have been staked out and recorded, and in a considerable number of cases Crown Patents have been issued. The attention of the miners in the past has been chiefly directed to placer mining properties, to operate which required less capital and from which more immediate results could be obtained. Outside of the Conrad district very little work of a development character is being done on quartz mining claims, but as the rich placer mines become worked out the miners are taking a greater interest in quartz mining property, and it is confidently expected that this increased interest will lead to the discovery of quartz of sufficient body and value to warrant operation and the installation of machinery. There seems to be little reason to doubt that valuable ore exists in the territory, but owing to the great over-burden concealing the veins it is very difficult to discover.

COAL.

Coal is being mined in the Yukon Territory at two points, namely, at Tantalus on the Yukon river, about twenty miles above Five Finger rapids, and on Coal creek about fifty miles below Dawson.

The Tantalus mine is leased by Mr. H. H. Phillips, and its output is about twelve thousand tons a year. The mine is equipped with comfortable miners' cabins, docks, chutes and tipples, and a tunnel has been run about seventeen hundred feet in the hill. The mine employs forty-five men and has a capacity of two hundred tons per day. The output, however, is limited, owing to the supply of barges for shipment to Dawson not being sufficient. The coal is sold to The Yukon Navigation Company for use on their steamers, and for domestic purposes in Dawson.

The Sourdough coal mine on Coal creek has a capacity of about ten thousand tons per annum, limited, however, by the means of shipment not being adequate. The coal is run down to the Yukon river on cars and carried to Dawson on the company's steamer *Lightning*, and sold for domestic purposes at the rate of \$16 per ton.

I regret that the short time at my disposal prevented me from visiting all the districts of the Territory where discoveries have been made and where operations are being carried on, but I endeavoured to obtain, from reliable sources, as much information as possible with respect to such of the districts as I was unable to visit, and I trust that the manner in which I have carried out your instructions, as outlined in the above report, will meet with your approval.

Respectfully submitted,

H. H. ROWATT.



Shifting Lower Dominion.



Arctic Chief.

Arctic Chief.



Craftsman.



Pueblo

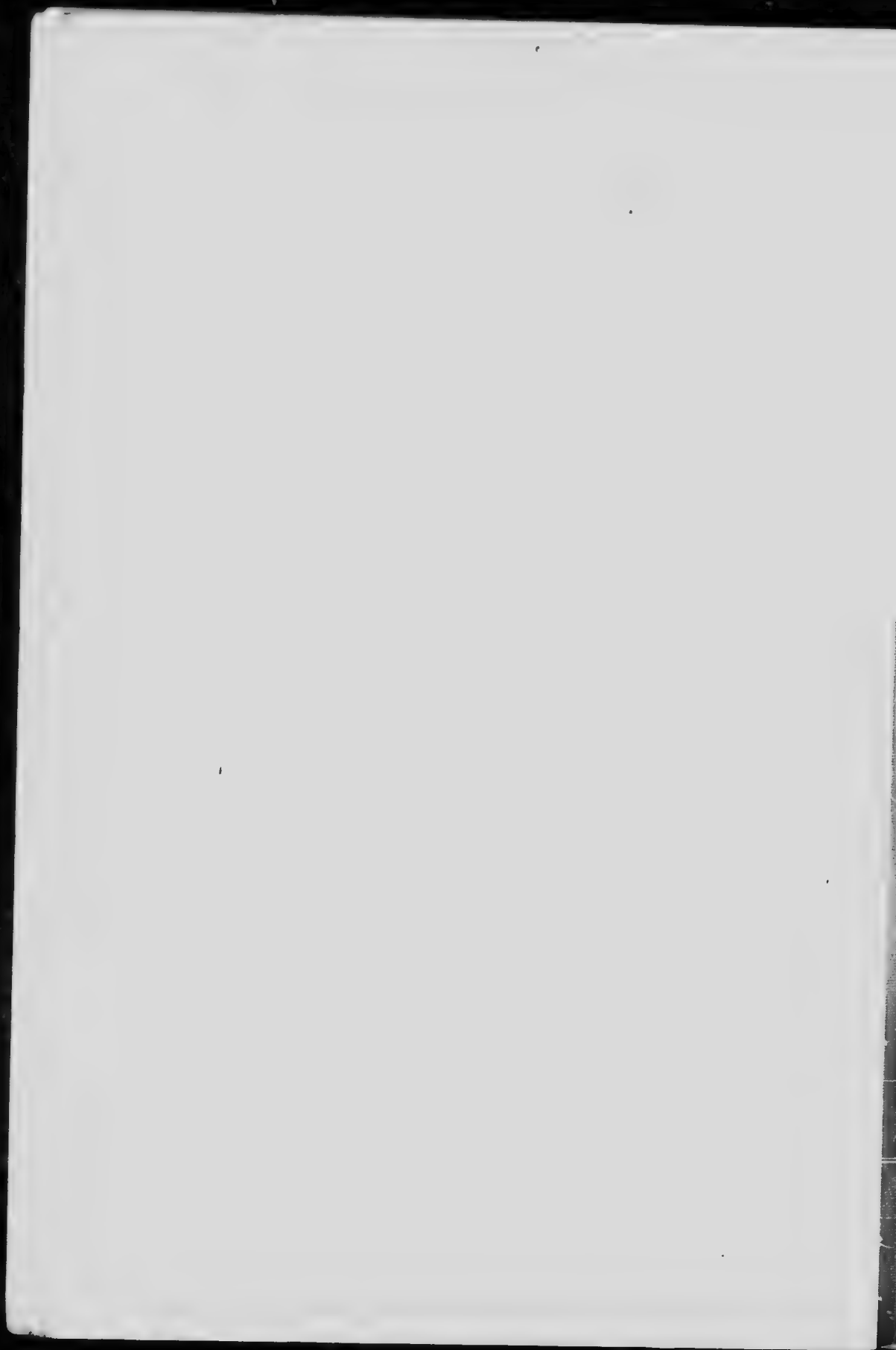


The Mill at Twelvemile River.





Logging.



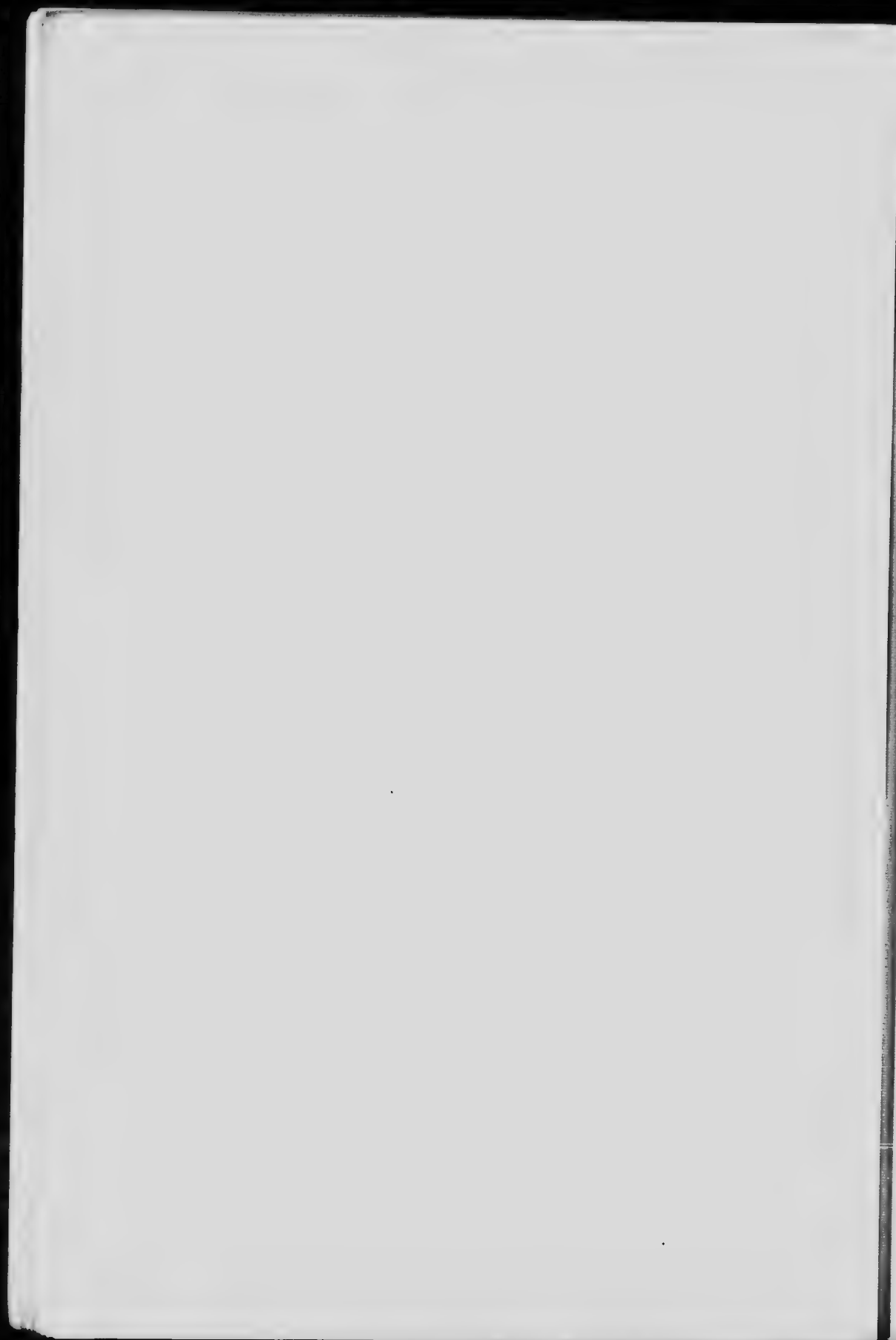


Lagging.



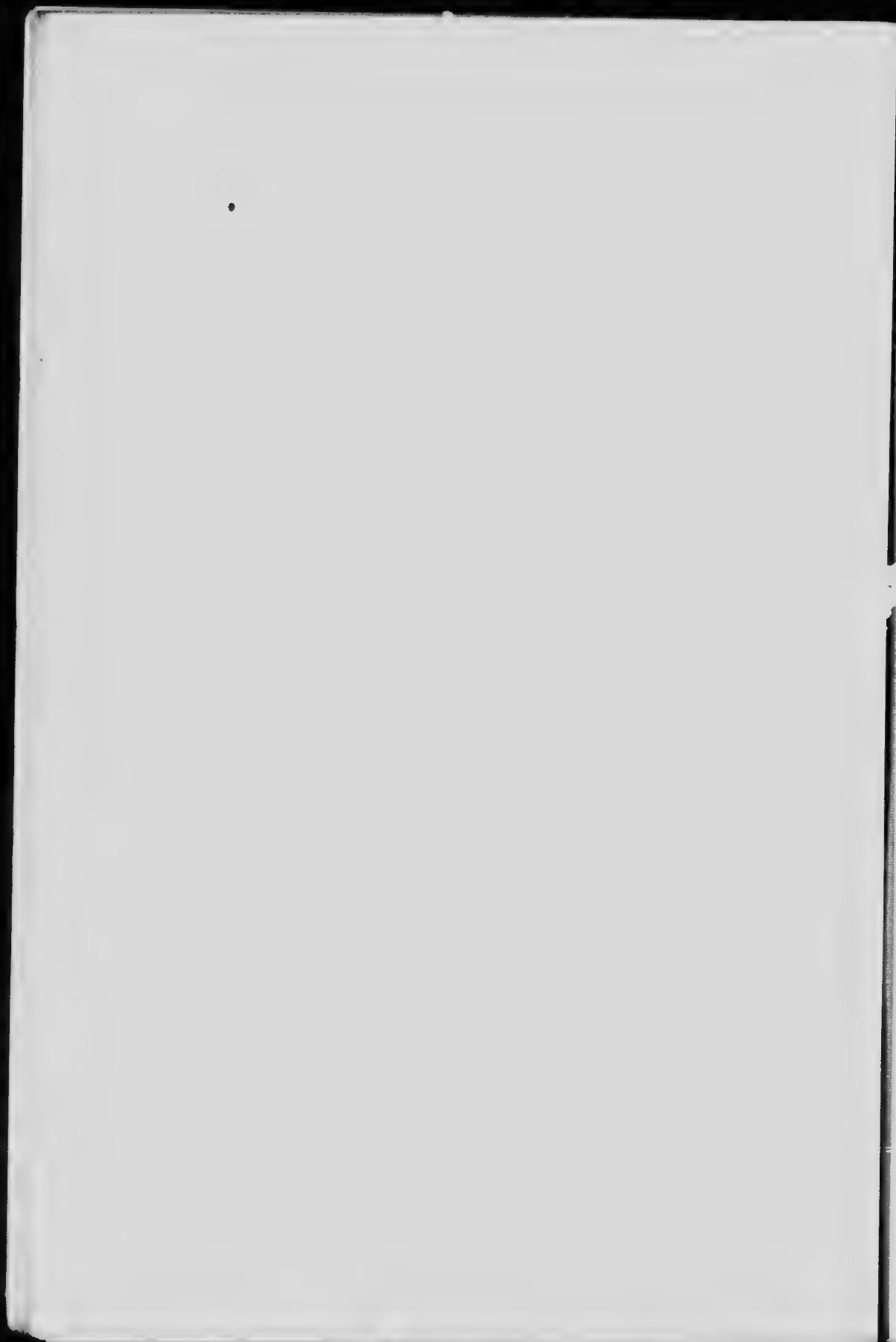


Lumber at Teon-stone Host



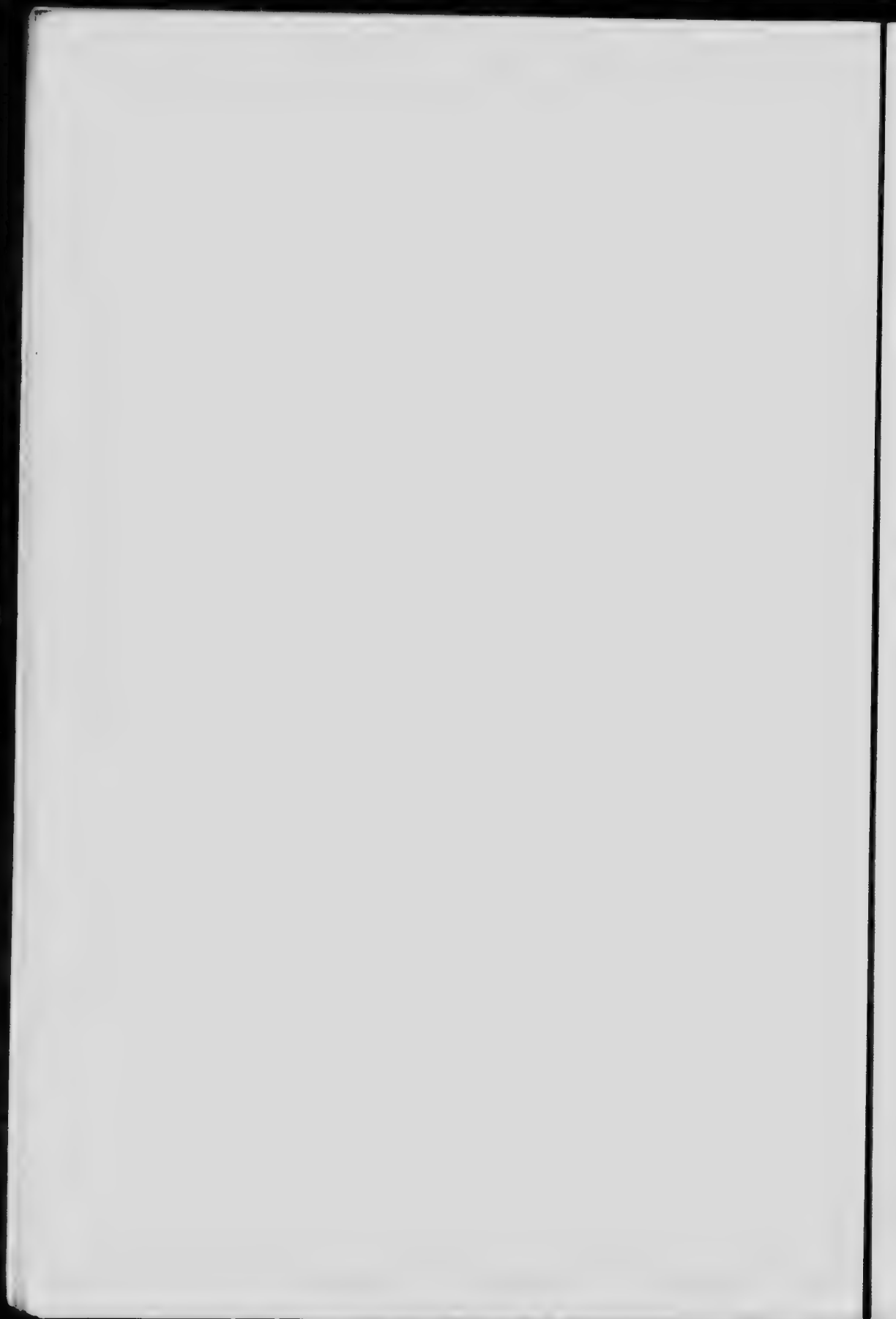


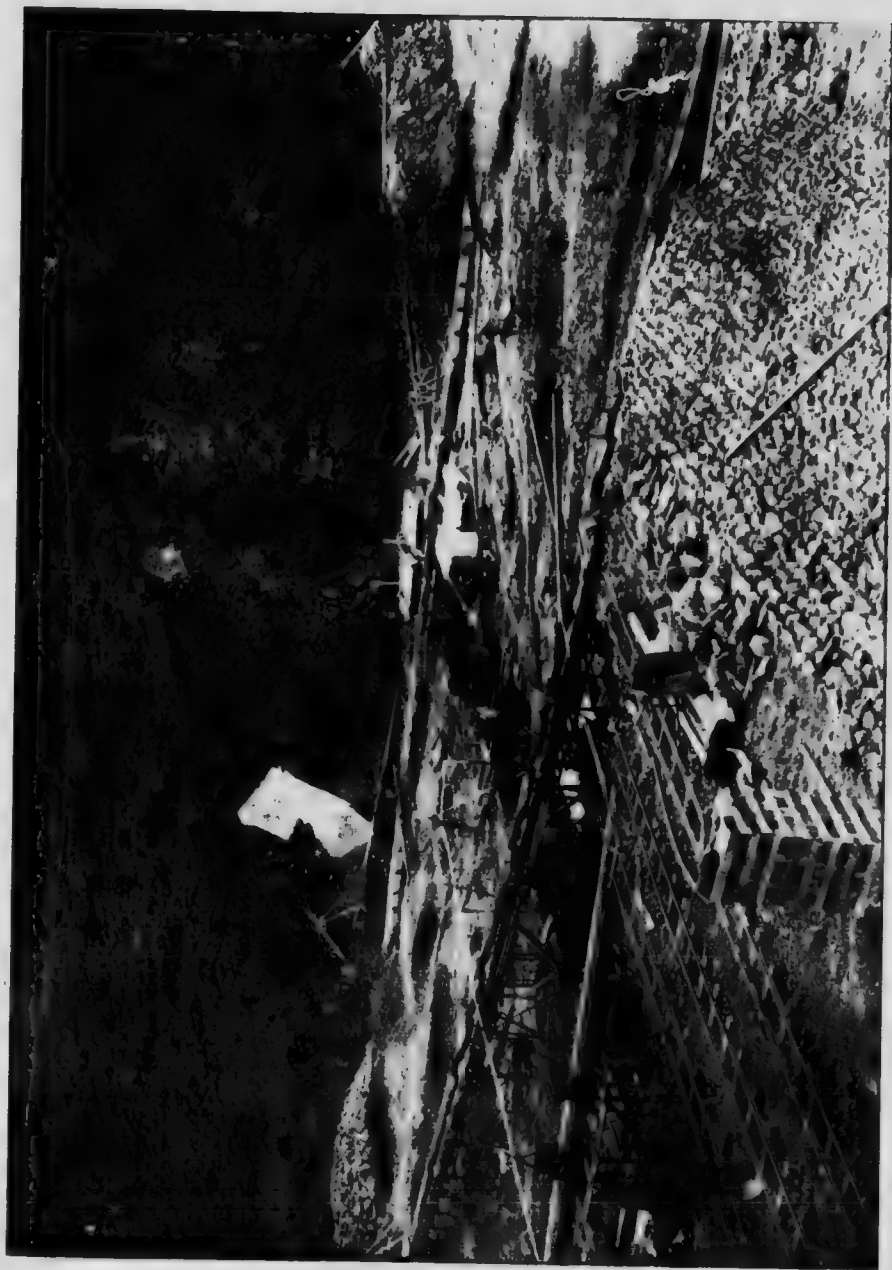
Underpinning for Flume.



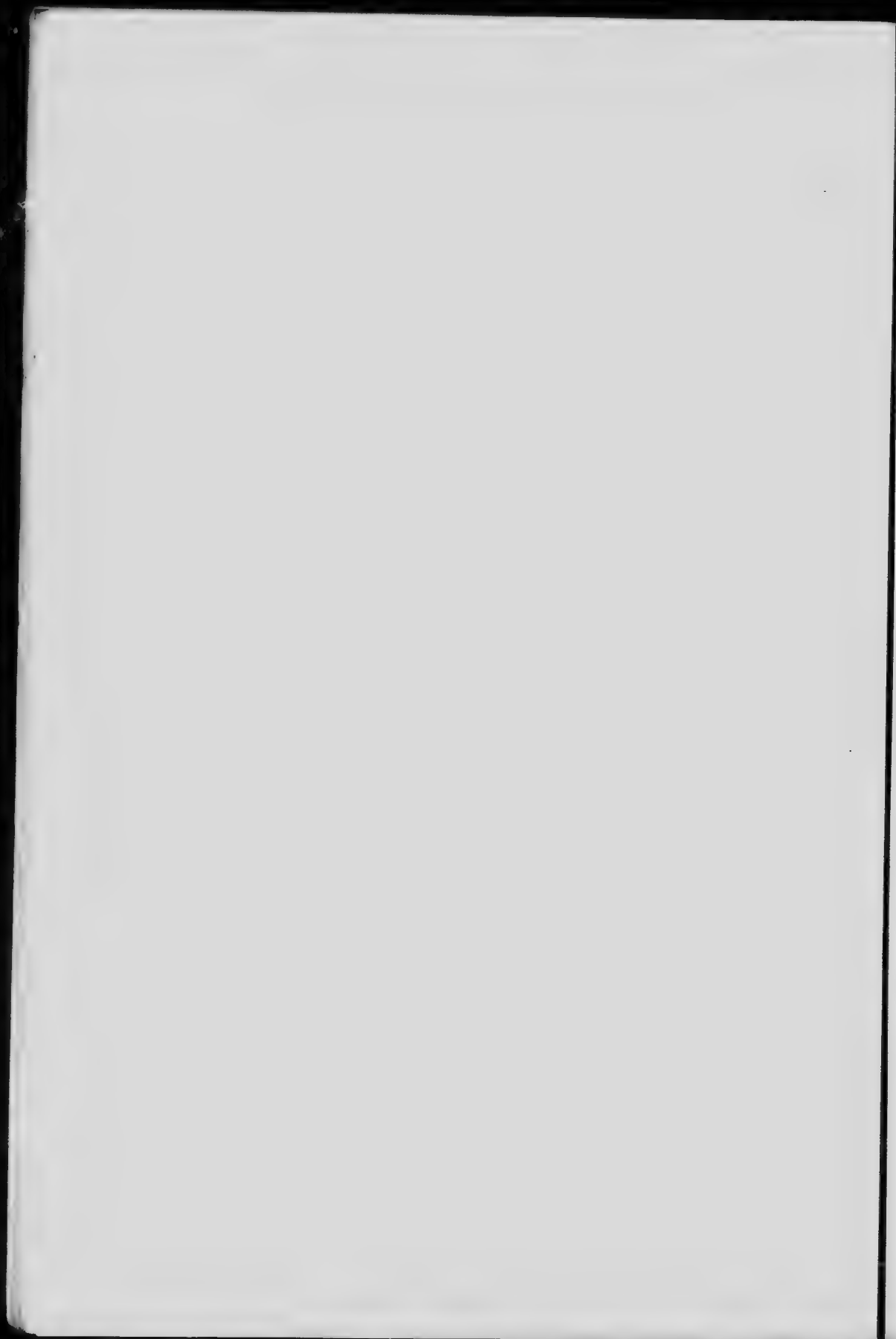


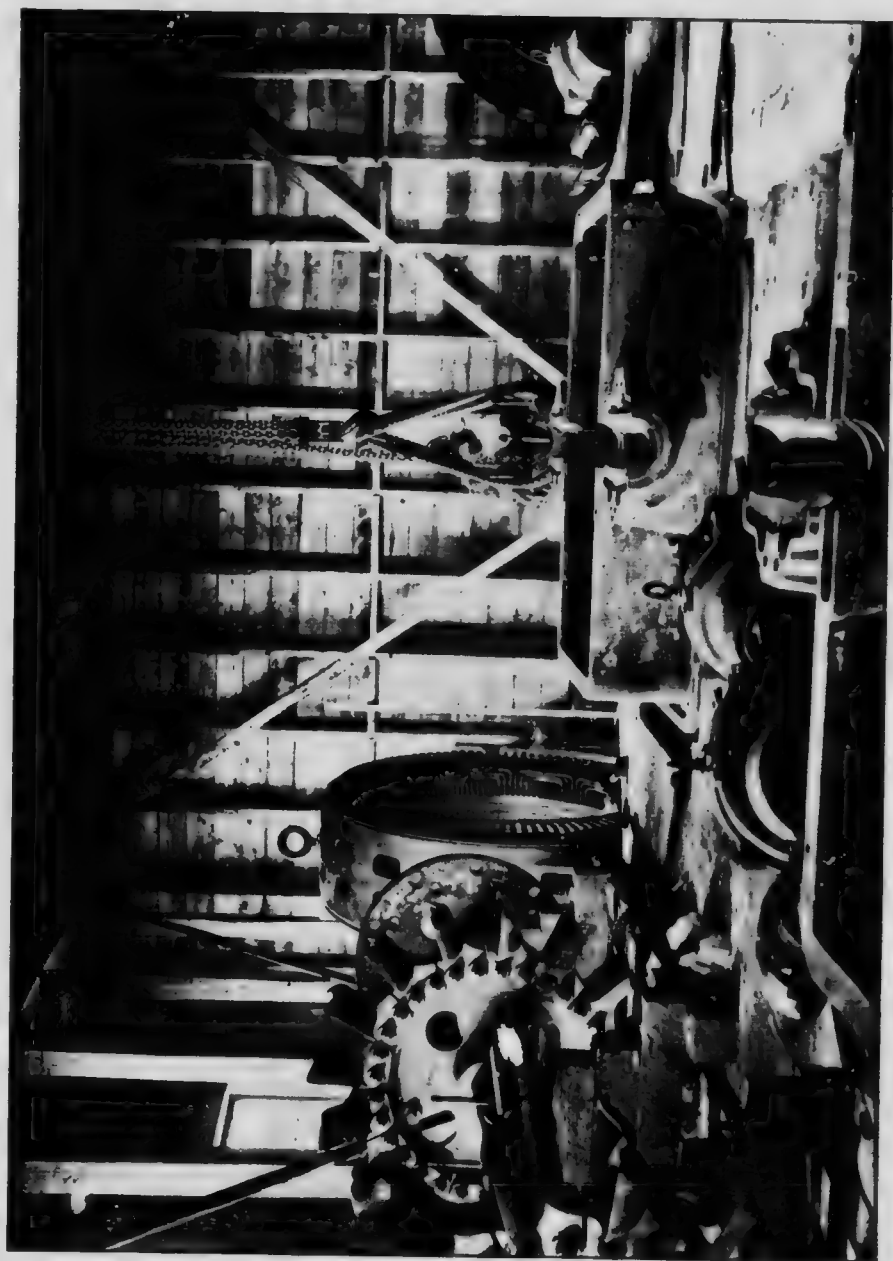
Freighting Power House Machinery.



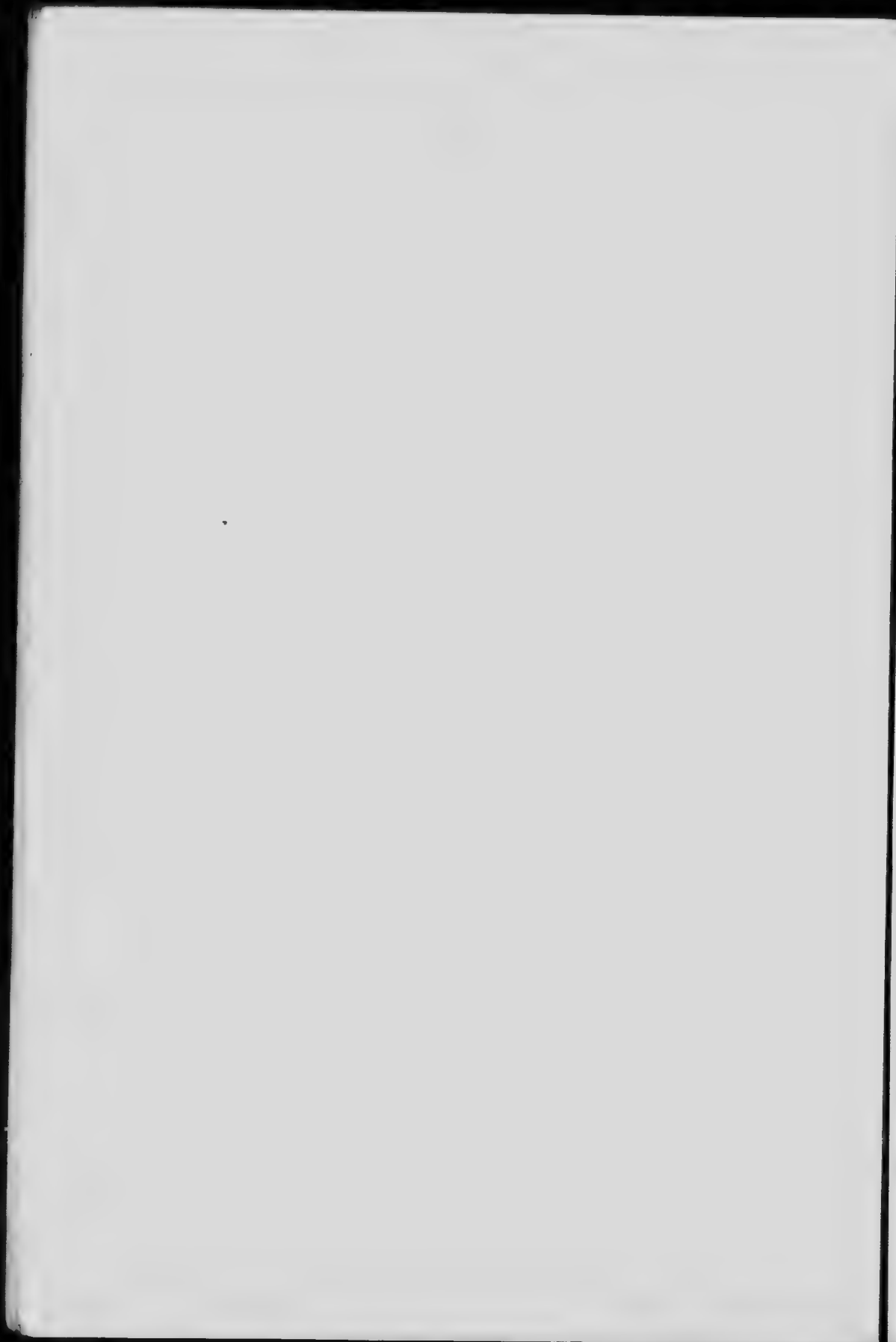


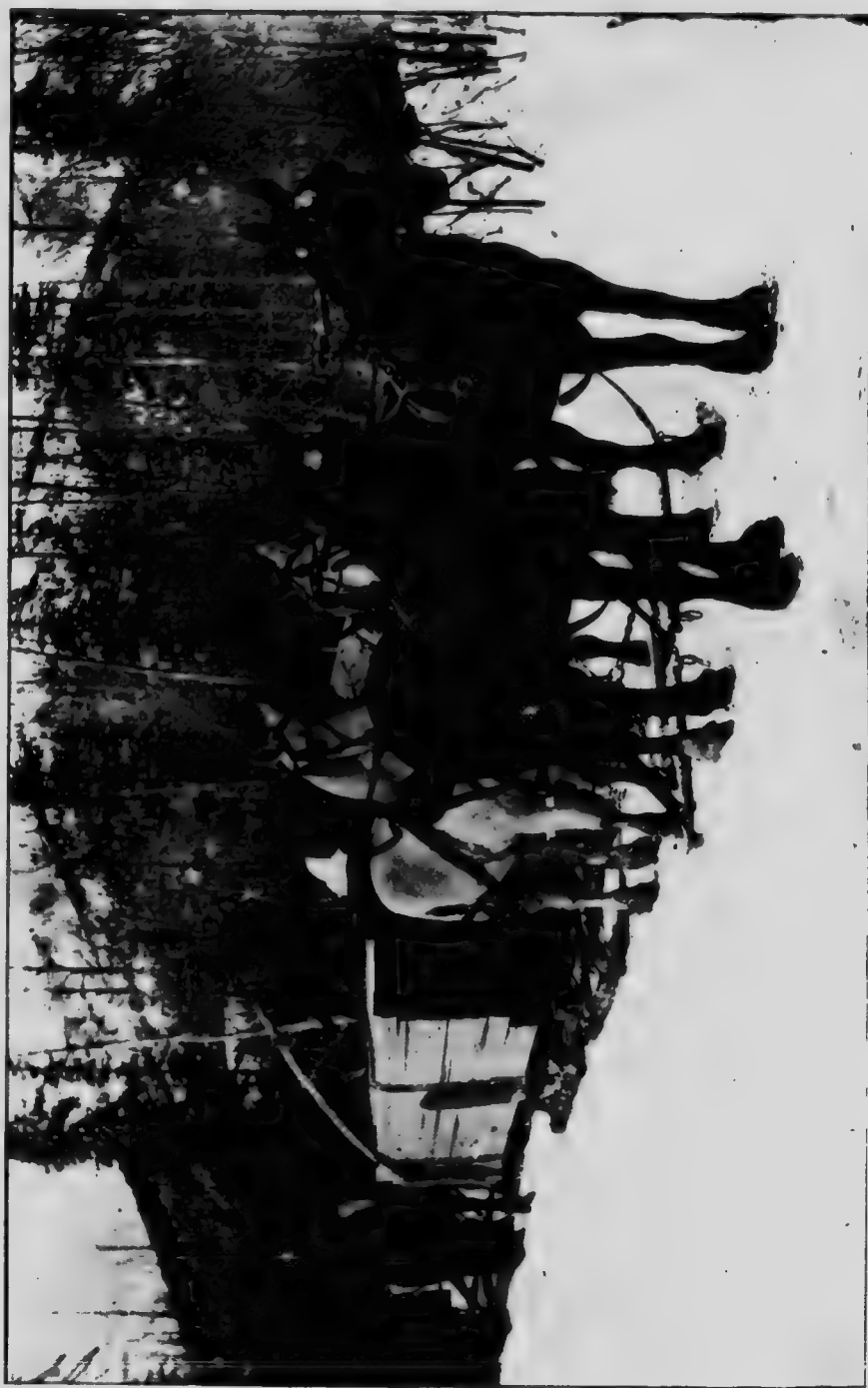
Commencement of the Dam on Bonanza.



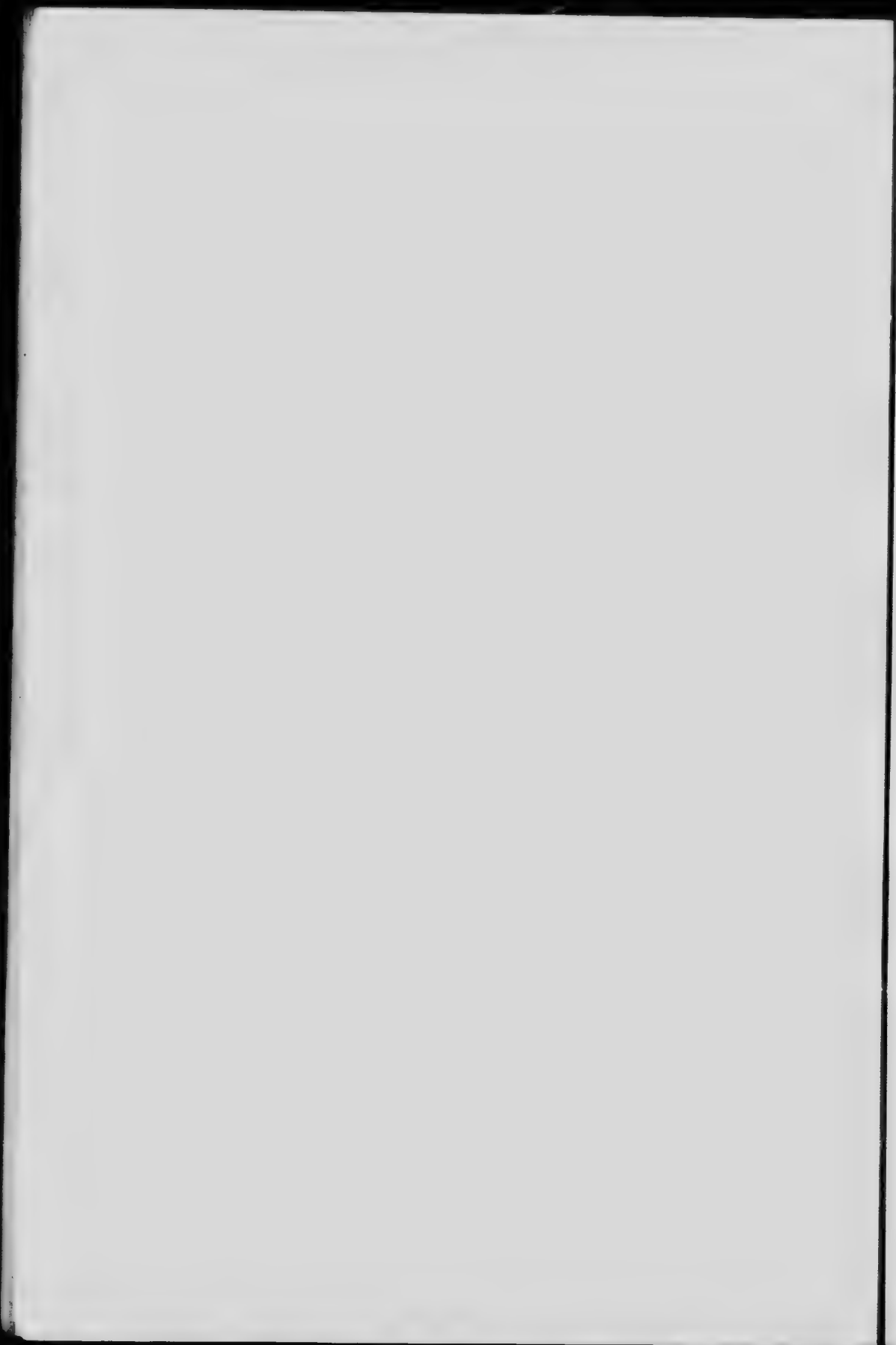


Interior Power House.





Distributing Flume Timber.

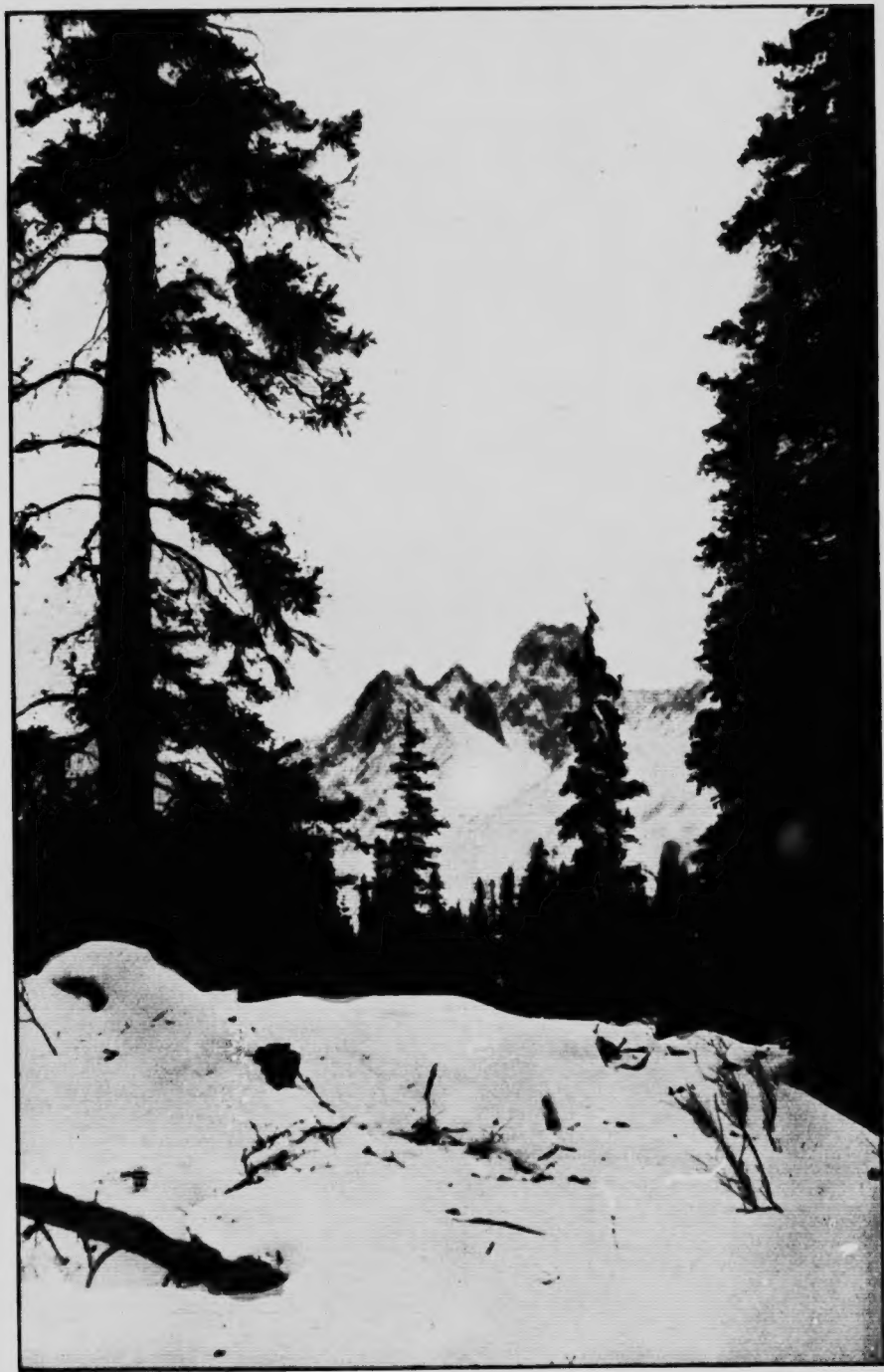




Flume under Construction.



Food Cache on Twelvemile.



The Toomstones.